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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/892,790

06/28/2001

Ki-Ook Park

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1084

8439 7590 09/20/2007

ROBERT E. BUSHNELL

1522 K STREET NW

SUITE 300

WASHINGTON, DC 20005-1202

EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

09/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/892,790	PARK ET AL.	
	Examiner	Art Unit	
	William J. Klimowicz	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Status

Claims 1-20 have been affirmatively cancelled by the Applicant in an amendment filed on October 18, 2004.

Claims 21-60 are currently pending.

Prior to the Amendment filed by Applicant on August 22, 2007 (via Certificate of Mailing), the Board of Patent Appeals and Interferences (hereinafter "Board") rendered a decision affirming the Examiner's rejection of claims 21, 30, 31, 32 and 41 under 35 U.S.C. 102(a),(e) as being anticipated by Nepela et al. (US 5,568,981). See the Board's decision of June 22, 2007.

In accordance with 37 CFR 41.50 (B), the Board also rejected claims 21-60 under 35 USC 102, 103 and 112. See Board's Response of June 22, 2007 for details of such rejections. The Board also indicated that "[s]ince we have entered new rejections, our decision is not a final agency action." *Id.* at page 34.

The Applicant's current amendment, filed August 22, 2007, is timely with respect to the Board's decision.

Drawings

The amended drawings filed on August 22, 2007 (received by the Patent Office on August 24, 2007) have been approved.

Art Unit: 2627

The drawings, in the opinion of the Examiner, comply with the written description requirement of 35 USC 112 1st paragraph. The drawings changes filed August 22, 2007, contain subject matter which was described in the original disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the drawing changes.

Specification

The amended specification filed on August 22, 2007 (received by the Patent Office on August 24, 2007) has been approved.

The amended specification, in the opinion of the Examiner, complies with the written description requirement of 35 USC 112 1st paragraph. The specification amendment filed August 22, 2007, contains subject matter which was described in the original disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the specification changes.

Specification Objection

The disclosure is objected to because of the following informalities:

With regard to Col. 5 (line 52 - counting text only) - the phrase "a pair of wide passage 135a, 135b)" should be changed such that "passage" as recited therein, is changed to --passages--

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to amended claim 21, the phrase “at least one of said not more than two separate air bearing platforms including a sidewall contiguous with one of said boundaries” is vague and ambiguous with respect to the Applicant’s disclosure and invention as described within the specification and drawings.

More concretely, as set forth in the language of claim 1, at lines 3-8, the slider is recited to have:

a body with a principal surface disposed to confront a recording surface of a recording medium, said principal surface having a lead portion and a rear portion, said lead portion being spaced upstream from said rear portion relative to a rotational direction of any recording medium confronted by said slider, said lead portion having a front edge, said rear portion having a rear edge, said ***front edge*** and said ***rear edge together defining boundaries*** of said principal surface ***in a longitudinal direction of said slider body***;

Emphasis added. The Applicant has now amended claim 21 to require that “at least one of said not more than two separate air bearing platforms including a ***sidewall contiguous with one of said boundaries***” (emphasis added) is misdescriptive of the invention as disclosed. None of the two separate air bearing platforms (e.g., 110c,

Art Unit: 2627

110d) are contiguous with the “boundaries” as previously defined within the claim. That is, the “boundaries” of the principal surface are defined by “said *front edge* [e.g., 121] and said *rear edge* [e.g., 123] *together . . . in a longitudinal direction of said slider body*,” See claim 21, lines 7-8. Emphasis added. That is, this is consistent with the longitudinal extent of the distance between the rear and the front edge of the slider along the longitudinal axis L as exemplified in Applicant’s Figure 4. Stated another way, the front edge (e.g., 121) defines one boundary; the rear edge (e.g., 123) defines another boundary. The front and rear edges (121, 123) together, define boundaries of the principal surface (e.g., 111) in a longitudinal direction (along L as seen, e.g., in FIG. 4) of the slider body (100). More specifically, none of the two separate air bearing platforms (e.g., 110c, 110d) are contiguous with either the front edge (121) or the rear edge (123) of the slider body, as depicted and/or described in the Applicant’s originally filed disclosure.

Thus, claim 21, as amended by Applicant in the Response filed August 22, 2007, is misdescriptive, ambiguous and indefinite as to the true meaning and scope when viewed in light of the Applicant’s original disclosure.

Additionally, since claims 22-30 depend directly or indirectly from claim 21, they too are thus rejected under the second paragraph of 35 U.S.C. § 112.

Similarly, with regard to claim 31, the Applicant defines “boundaries” as “said front edge and said rear edge together defining longitudinal boundaries of said principal surface in said first direction.” See claim 31, lines 5-6.

Amended claim 31, then recites, “at least one of said not more than two separate air bearing platforms extending from an edge of one of said boundaries.” *Id.* at lines 12-13.

None of the two separate air bearing platforms (e.g., 110c, 110d) extend from an edge of one of the boundaries (at 121 and/or 123) as depicted and/or described in the Applicant’s originally filed disclosure.

Additionally, since claims 32-41 depend directly or indirectly from claim 31, they too are thus rejected under the second paragraph of 35 U.S.C. § 112.

Also, with regard to claim 42, the Applicant defines “boundaries” as “said front edge and said rear edge together defining boundaries of said principal surface in said longitudinal direction of said slider.” See claim 42, lines 8-9.

Amended claim 42, then recites, “at least one of said not more than two separate air bearing platforms extending from an edge of one of said boundaries.” *Id.* at lines 17-18.

Again, as is factually evident, none of the two separate air bearing platforms (e.g., 110c, 110d) extend from an edge of one of the boundaries (at 121 and/or 123) as depicted and/or described in the Applicant’s originally filed disclosure.

Additionally, since claims 43-51 depend directly or indirectly from claim 42, they too are thus rejected under the second paragraph of 35 U.S.C. § 112.

The Examiner has made no prior art rejection of claims 21-60 because the subject matter encompassed by the claims must be reasonably understood without resort to speculation. Presently, speculation and conjecture must be utilized by the Examiner and by the artisan inasmuch as the claims, as presently drafted, do not adequately reflect what the disclosed

Art Unit: 2627

invention is. Note *In re Steele*, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.); Note also *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to amended claim 21, the phrase “at least one of said not more than two separate air bearing platforms including a sidewall contiguous with one of said boundaries” was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More concretely, as set forth in the language of claim 1, at lines 3-8, the slider is recited to have:

Art Unit: 2627

a body with a principal surface disposed to confront a recording surface of a recording medium, said principal surface having a lead portion and a rear portion, said lead portion being, spaced upstream from said rear portion relative to a rotational direction of any recording medium confronted by said slider, said lead portion having a front edge, said rear portion having a rear edge, said **front edge** and said **rear edge together defining boundaries** of said principal surface **in a longitudinal direction of said slider body**; and

Emphasis added. The Applicant has now amended claim 21 to require that “at least one of said not more than two separate air bearing platforms including a ***sidewall contiguous with one of said boundaries***” (emphasis added). As originally disclosed, however, none of the two separate air bearing platforms (e.g., 110c, 110d) are contiguous with the “boundaries” as previously defined within the claim. That is, the “boundaries” of the principal surface are defined by “said **front edge** [e.g., 121] and said **rear edge** [e.g., 123] **together . . . in a longitudinal direction of said slider body**.” See claim 21, lines 7-8. Emphasis added. That is, the language is consistent with the longitudinal extent of the distance between the rear and the front edge of the slider along the longitudinal axis L as exemplified in Applicant’s Figure 4. Stated another way, the front edge (e.g., 121) defines one boundary; the rear edge (e.g., 123) defines another boundary. The front and rear edges (121, 123) together, define boundaries of the principal surface (e.g., 111) in a longitudinal direction (along L as seen, e.g., in FIG. 4) of said slider body (100). More specifically, the invention as originally filed, fails to disclose any of the two separate air bearing platforms (e.g., 110c, 110d) as being contiguous with either the front edge (121) or the rear edge (123) of the slider body, as depicted and/or described in the Applicant’s originally filed disclosure.

Thus, claim 21, as amended by Applicant in the Response filed August 22, 2007, contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Additionally, since claims 22-30 depend directly or indirectly from claim 21, they too are thus rejected under the first paragraph of 35 U.S.C. § 112.

Similarly, with regard to claim 31, the Applicant defines “boundaries” as “said front edge and said rear edge together defining longitudinal boundaries of said principal surface in said first direction.” See claim 31, lines 5-6.

Amended claim 31, then recites, “at least one of said not more than two separate air bearing platforms extending from an edge of one of said boundaries.” *Id.* at lines 12-13.

None of the two separate air-bearing platforms (e.g., 110c, 110d) extend from an edge of one of the boundaries (at 121 and/or 123) as depicted and/or described in the Applicant’s originally filed disclosure.

Additionally, since claims 32-41 depend directly or indirectly from claim 31, they too are thus rejected under the first paragraph of 35 U.S.C. § 112.

Also, with regard to claim 42, the Applicant defines “boundaries” as “said front edge and said rear edge together defining boundaries of said principal surface in said longitudinal direction of said slider.” See claim 42, lines 8-9.

Amended claim 42, then recites, “at least one of said not more than two separate air bearing platforms extending from an edge of one of said boundaries.” *Id.* at lines 17-18.

Again, as is factually evident, none of the two separate air-bearing platforms (e.g., 110c, 110d) extend from an edge of one of the boundaries (at 121 and/or 123) as depicted and/or described in the Applicant's originally filed disclosure.

Additionally, since claims 43-51 depend directly or indirectly from claim 42, they too are thus rejected under the first paragraph of 35 U.S.C. § 112.

Claim Rejections Under 35 USC 102

It is noted that claims 52-60, *inter alia*, were rejected under 35 U.S.C. 102(b) as being anticipated by Murray (US 5,406,432), in an opinion by the Board, rendered June 22, 2007. These claims were rejected by the Board in accordance with 37 CFR 41.50(b).

The Examiner, in order to avoid superfluous rejections, has utilized the closest art applied by the Board against the claims that do not fall prey to 35 USC 112 1st and or 2nd. Should the application be reappealed, of course, the Board is entitled to reapply any previous Board rejection as it sees fit, or introduce any new grounds of rejections, in accordance with 37 CFR 41.50(b).

After carefully reviewing the Board's reasoning, and the Applicant's arguments, the Examiner maintains the Board's rejection as reasonable. A restatement of the rejection is made below in greater detail.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 52-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray (US 5,406,432).

As per claims 52, 55 and 58, Murray (US 5,406,432) discloses a negative pressure air bearing slider (11) having a negative pressure cavity (e.g., between the rails 14e, 14d of FIG. 4 and 5 - note the corresponding designations of 14e, 14d are not expressly shown in FIG. 5), comprising: a body with a principal surface (flat, non-raised surface of slider (11) facing a recording medium, the outer lateral extent of which is the side of rails (14e, 14d) - this is indeed a *principal* surface) disposed to confront a recording surface of a recording medium, said principal surface having a lead portion (proximate (11a)) separated from a rear portion (proximate pad (14a)) by a central portion (portion of slider between the aforementioned lead and rear portions), said lead portion and said central portion being spaced upstream from said rear portion relative to a rotational direction of any recording medium confronted by said slider (11) (i.e., the rotational direction of a recording medium would be in a tangential direction of right-to-left as seen in FIGs. 4 and 5), said lead portion having a front edge (at (11a)), said rear portion having a rear edge (11b), said front edge (11a) and said rear edge (11b) together defining boundaries of longitudinal edges (or sides) of said principal surface in a longitudinal direction of said slider body (11) (i.e., the most outboard side edges, or sidewalls of rails (14e, 14d) of the

Art Unit: 2627

slider *in a longitudinal direction* have a longitudinal extent no greater than the front and rear edges along the longitudinal direction, as is clearly evident from FIGs. 4 and 5), said central portion being formed by opposite longitudinal sides separated by a longitudinal center and bounded by said longitudinal edges (e.g., see FIGs. 4 and 5); and a plurality of arcuately shaped arms (14e and 14d) embracing a majority of said principal surface and each having distal ends extending from opposite ones of said longitudinal sides (i.e., the aforementioned most outboard sidewalls of rails (14e, 14d)) curving or arcuately inwardly across said central portion of said principal surface with spaced-apart proximal facing ends (e.g., the inboard most facing side edges or sidewalls of rails (14e, 14d) that directly face each other) of said arms together forming a U-shaped air bearing platform located between said boundaries to separate a negative pressure cavity defined by said arms (14e, 14d) on said principal surface from said boundaries (i.e., the most outboard side edges, or sidewalls of rails (14e, 14d) of the slider in a longitudinal direction have a longitudinal extent no greater than the front and rear edges along the longitudinal direction, as is clearly evident from FIGs. 4 and 5); at least one of said distal ends (of rails (14e, 14d)) forming a terminal end wholly within said central portion and spaced-apart from said rear portion (that is, both rails (14e, 14d) terminate prior to the trailing edge (11b)).

As per claims 53, 56 and 59, further comprising a cross-rail portion (e.g., including 14b) of said platform extending generally laterally across said principal surface and connecting said proximal facing ends (e.g., the inboard most facing side edges or sidewalls of rails (14e, 14d) that directly face each other).

As per claims 54, 57 and 60, further comprising said arms (14e, 14d) adjoining said longitudinal edges - again, the longitudinal edges are the most outboard side edges, or sidewalls

of rails (14e, 14d) of the slider in a longitudinal directions have an extent no greater than the front and rear edges along the longitudinal direction, as is clearly evident from FIGs. 4 and 5).

Absolutely nothing in the invention as presently drafted limits the “longitudinal edges (or sides)” to the outermost edges of the sidewall(s) of the slider body.

Note furthermore that even Applicant’s own description of the invention, makes it abundantly clear, that the side edge of the slider body is not necessarily parallel or contiguous with a sidewall of the slider body. For instance, as Applicant recites in the amendment to the specification (e.g., see page 2 of Applicant’s amendment filed August 22, 2007):

The U-shaped air-bearing platform circumscribes a majority of negative pressure cavity 150 that is formed on principal surface 111. At least one of the rear ABS platforms 110c, 110d includes a sidewall 190 that is contiguous with *side edge 192 of slider body 100* extending between lead edge 121 and rear 123 . . . [Emphasis added - see Applicant’s amended FIG. 4, also filed on August 22, 2007.]

Response to Arguments

Applicant's arguments filed August 22, 2007, as it applies to claims 52-60 being rejected under 35 U.S.C. 102(b) as being anticipated by Murray (US 5,406,432), have been fully considered but they are not persuasive.

It is noted that claims 52-60, *inter alia*, were rejected under 35 U.S.C. 102(b) as being anticipated by Murray (US 5,406,432), in an opinion by the Board, rendered June 22, 2007. These claims were rejected by the Board in accordance with 37 CFR 41.50(b).

After carefully reviewing the Board's reasoning, and the Applicant's arguments, the Examiner maintains the Board's rejection as reasonable. A restatement of the rejection is made below in greater detail.

The Applicant opines at page 34 of the Response filed August 22, 2007:

Applicant's independent claims 21, 31, 52, 55 and 58 define relations between the boundaries defined by the front edge and the rear edge, and the air bearing platforms. These relations are absent from Murray U.S. 5,406,432. Accordingly, there is no anticipation.

The Examiner respectfully disagrees, and maintains the Board's rejections of claims 52-60 by Murray (US 5,406,432) under 35 U.S.C. 102(b).

Pertaining to the claims rejected under 35 U.S.C. § 102 as being anticipated by the disclosure of Murray (US 5,406,432), the following should be noted. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. *RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); *cert. dismissed*, 468 U.S. 1228 (1984); *W.L. Gore and Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

The Examiner, as clearly articulated in the rejection, *supra*, has set forth a one-to-one correspondence with each and every element of the *claimed* invention. More concretely, as recited MPEP§2106:

Office personnel are to give claims their ***broadest reasonable interpretation*** in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). ***Limitations appearing in***

the specification but not recited in the claim are not read into the claim. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). ***In re Zletz***, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (“During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow. . . . The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed. . . . An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.”). [Emphasis in bold italics added].

Moreover, one must also bear in mind that limitations contained within Applicant’s arguments cannot be read into the claims for the purpose of avoiding prior art. *In re Sporck*, 386 F.2d 924, 155 USPQ 687 (CCPA 1968).

As set forth in the MPEP § 706, “the standard to be applied in all cases is the “preponderance of the evidence” test. In other words, an examiner should reject a claim if, in view of the prior art and evidence of record, it is more likely than not that the claim is unpatentable.” Clearly, the Examiner has established that one of ordinary skill in the art would *reasonably* construe the one-to-one correspondence with each and every element of the *claimed* invention, in the manner set forth in the rejection, *supra*, by at least the *preponderance* of the evidence. The Applicant’s arguments have fallen well short of rebutting the Board’s *prima facie* case of anticipation.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Friday (7:30AM-6:00PM).

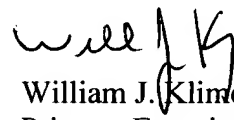
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 09/892,790

Page 17

Art Unit: 2627


William J. Klimowicz
Primary Examiner
Art Unit 2627

WJK

Approved
WJ
8-30-07

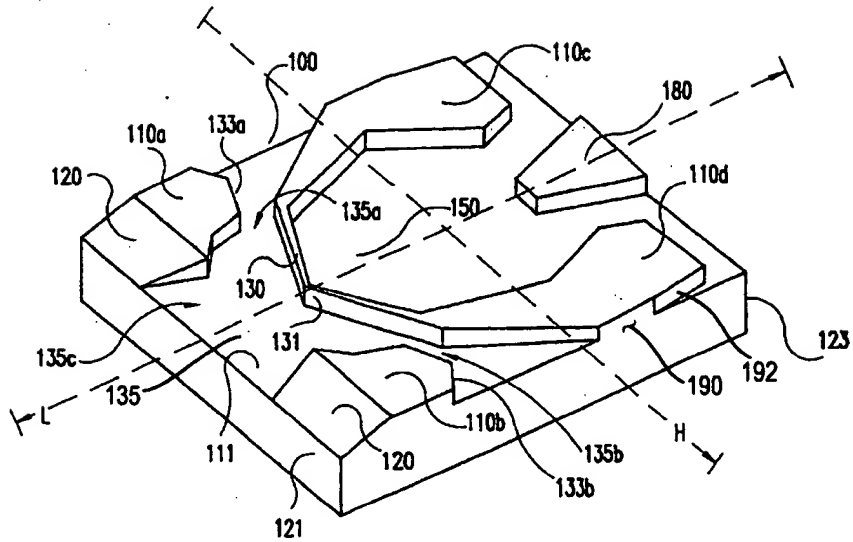


FIG.4

(Amended)

[illegible]

(Amended)

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8-30-07

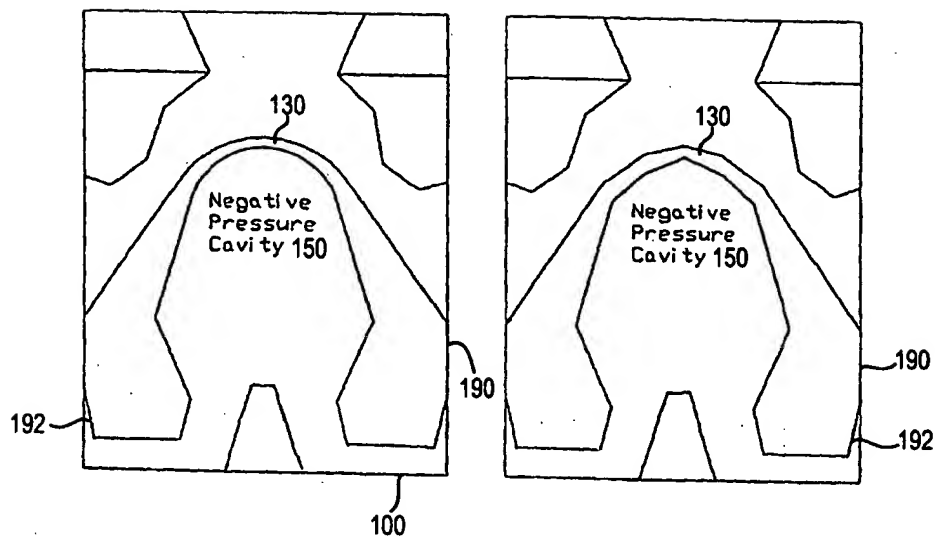


FIG. 6A

FIG. 6B

(Amended)

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8-30-07

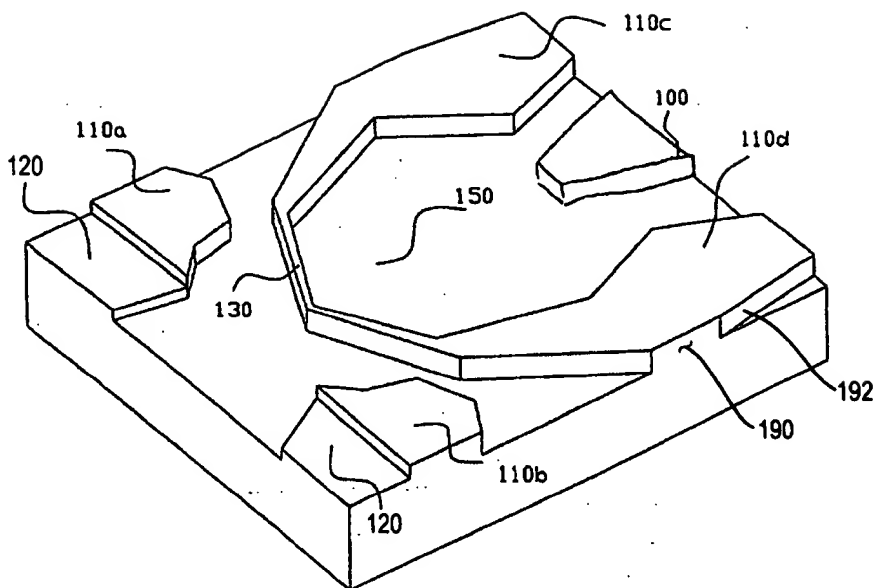


FIG. 7
(Amended)

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8-30-07

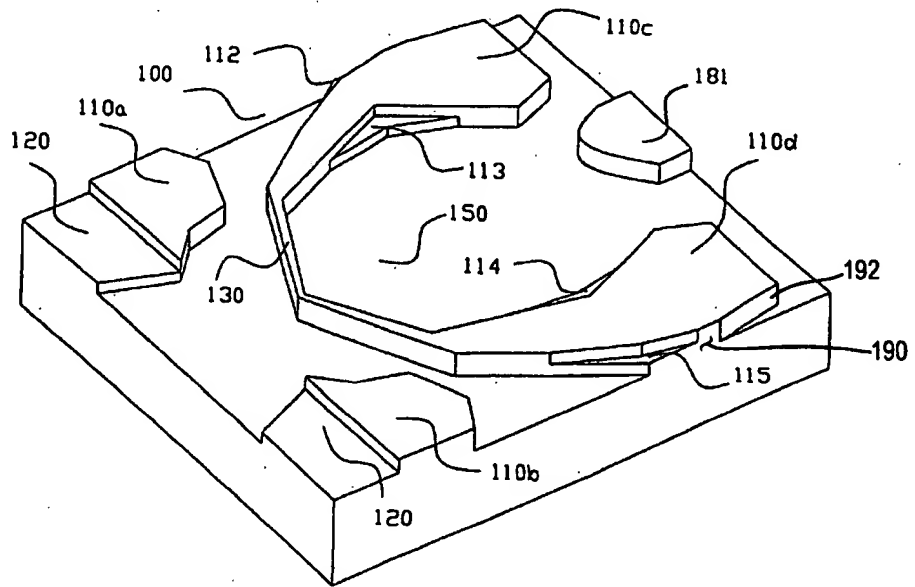


FIG. 8
(Amended)

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8-30-07
LJK

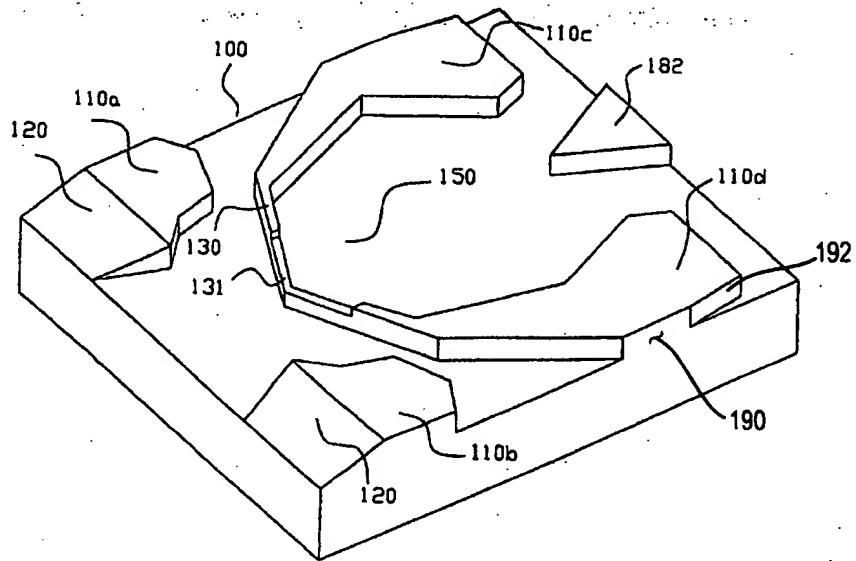


FIG. 9
(Amended)

Approved
WK
8-30-07

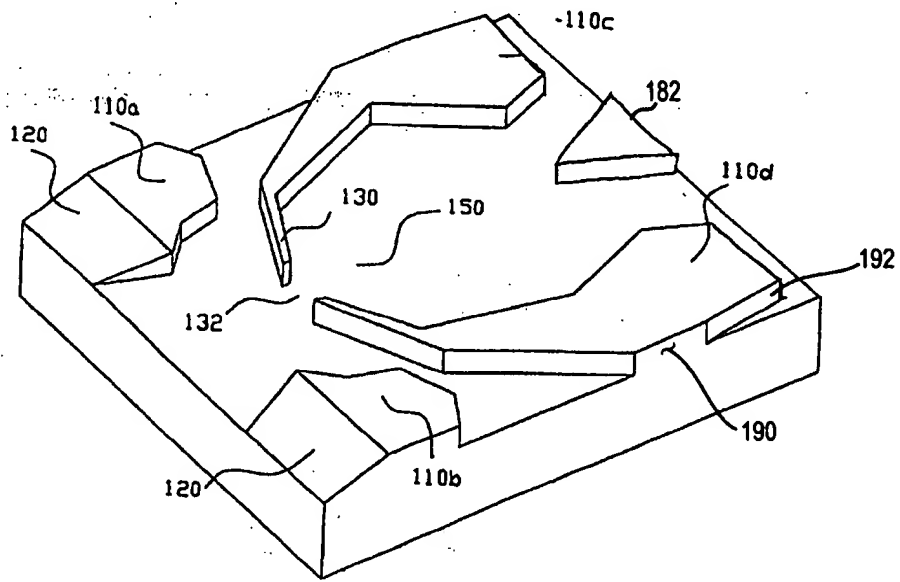


FIG. 10
(Amended)

(Amended)

Approved
LW
8-20-07

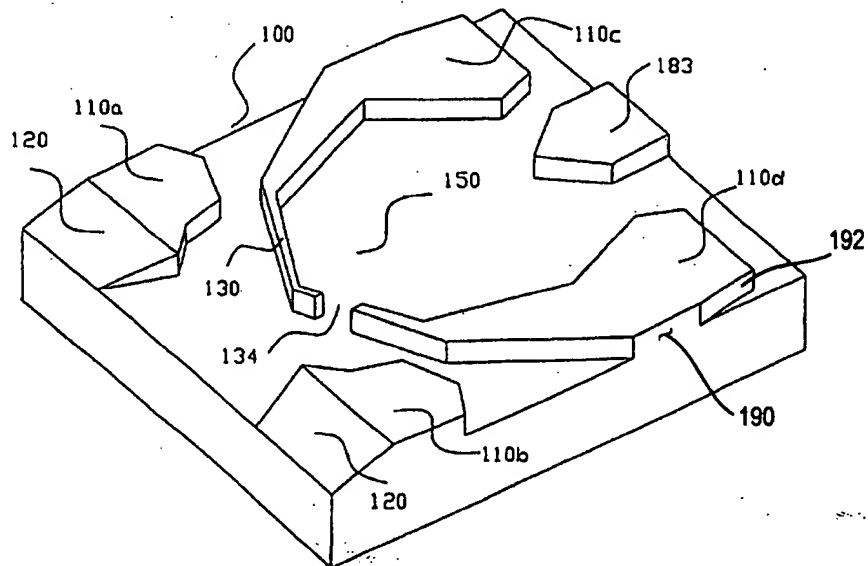


FIG. 12
(Amended)